

INFORMATION REPORT

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SUPPLEMENT TO
REPORT NO.

COUNTRY USSR (Leningrad Oblast)

SUBJECT Aluminum Plant at Volkhovstroi

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PLACE
ACQUIRED
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DATE OF
INFO.

ALL INFORMATION CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE
OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT

plant installations. Date of observation: August 1945 to March 1948. (No PW No) (paras 1 through 4)

PW, 34, electrical engineering student, worked as draftsman in the electrical office. He entered all casting shops (paras 5 through 8).

PW, 26, farmer, worked as transportation and construction hand in the plant from October 1945 to March 1948. His knowledge of the Russian language enabled him to converse with Soviet plant personnel. (No PW No) (paras 9 through 11)

On the eastern outskirts of Volkhovstroi (32°21'E/59°N) Leningrad Oblast, some hundred meters east of the power plant and Volkhov River, south of the Leningrad-Tihvin railroad line.

2. Plant installations:

The plant was 20 years old and was to be greatly enlarged before the war, a project which did not proceed beyond the first stage. The most important plant installations, evacuated to the Ural in 1942, returned and the slight war damages were repaired in 1945.

a. Workshop North was being equipped with new American installations in the late Summer of 1946. Eighty tubs were put into operation; ten testing tubs have been installed since August 1947.

b. In Workshop South old aluminum tubs were dismantled and reinstalled. Fifty percent (about 40) resumed operation in the Summer of 1947.

c. The transformer station was being equipped with five American transformers, five in operation, one in reserve, and ten rectifiers.

d. It was believed that the aluminum dressing plant would not be

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1947, was still being equipped with mixing machines and furnaces by March 1948. For plant layout see Annex 1. (For better survey on the plant area, many construction cabins, small wooden administration buildings and sheds were not entered on the sketch which contains the essential plant buildings only.)

Work

3. Force:

A total of 3,000 laborers, 30 percent women, working in three shifts; 900 additional PWs doing clearing and construction work.

4. Production:

Aluminum bars, 80 x 30 x 20 mm, with firm designation inscribed. Output was not determined.

5. With the reconstructions started by the end of June 1945, the first workshops resumed production in late 1946. According to a Soviet foreman the plant is to be completed by the end of the present 5-Year Plan.

6. Measuring instruments above the tubs indicated an electric power of 5,000 to 6,000 amperes and a tension of three to six volts.

7. A cement factory was being reconstructed in the northeast part of the plant area. Four reconstructed silos were used as china clay stores. For plant layout see Annex 2.

8. Production: Aluminum bars, output unknown.

9. The two adjacent melting shops each measured 150 x 30 meters and had four stories. For sketch of average tubs see Annex 3.

10. One workshop had testing tubs of German, American, English, French and Polish origin.

11. The bauxite dressing shop had 11 containers, of English origin, 10 meters high, 2.5 meters in diameter; an alleged bauxite washing installation with soda admixtures, and the following installations:

18 to 20 coal-fired insulated boilers

8 boilers without firing but with pipe connection (4 meters high, 3 meters in diameter)

3 horizontal rotary drums (4 meters long, 2 meters in diameter) with gear drive.

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Field Comment:

- a. Although the periods of observation date back to early 1948 the agreeing statements give the first detailed post-war information on the plant layout, plant installation etc.
- b. Annex 1 and 2 agree on the general plant layout and approach facts given on an aerial photograph of 11 September 1941.
- c. The sketch of an average aluminum tub (Annex 3) is of

aluminum is estimated at approximately 10,000

3 Annexes: 3 sketches.

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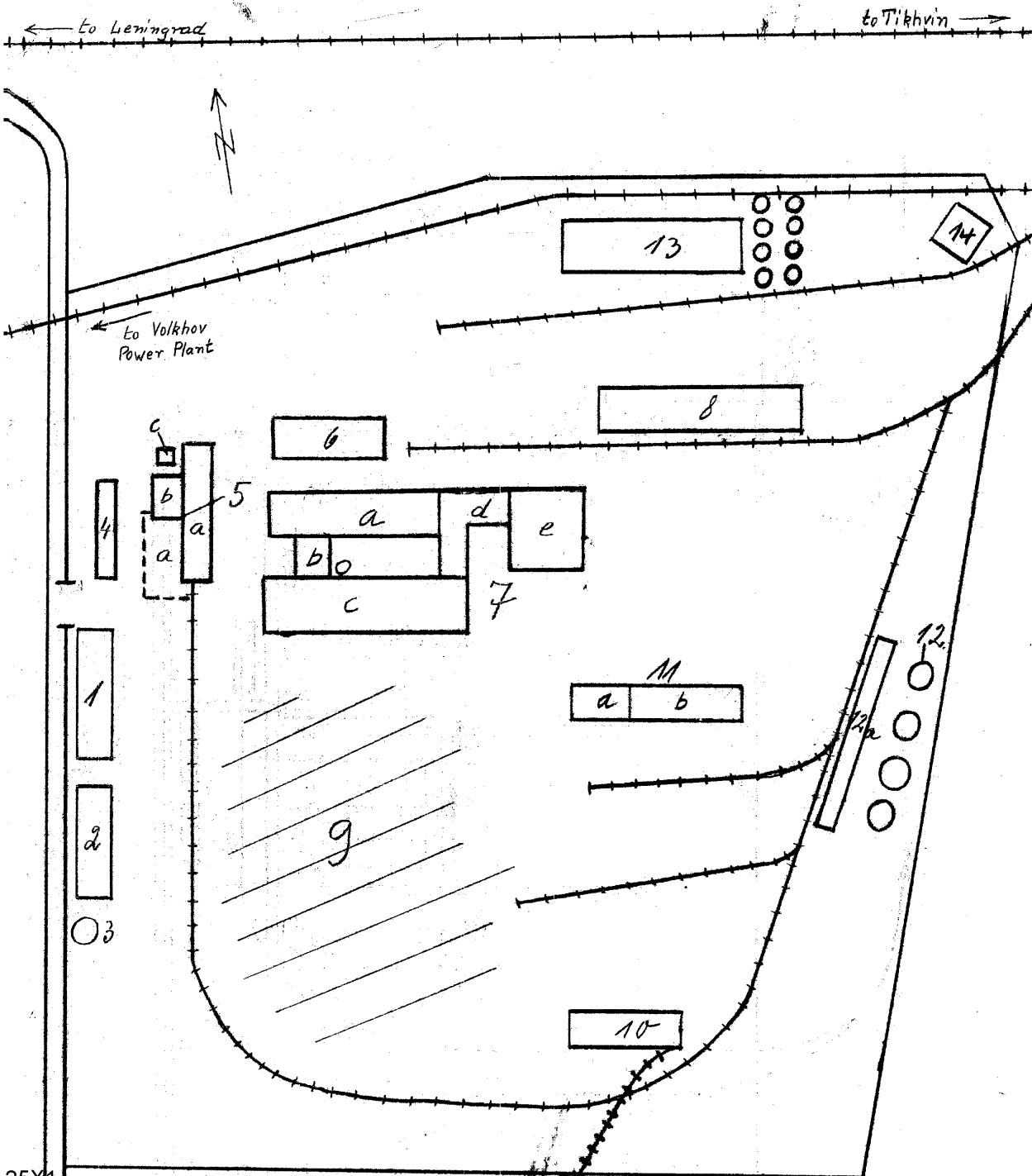
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Annex 1

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Annex 2,

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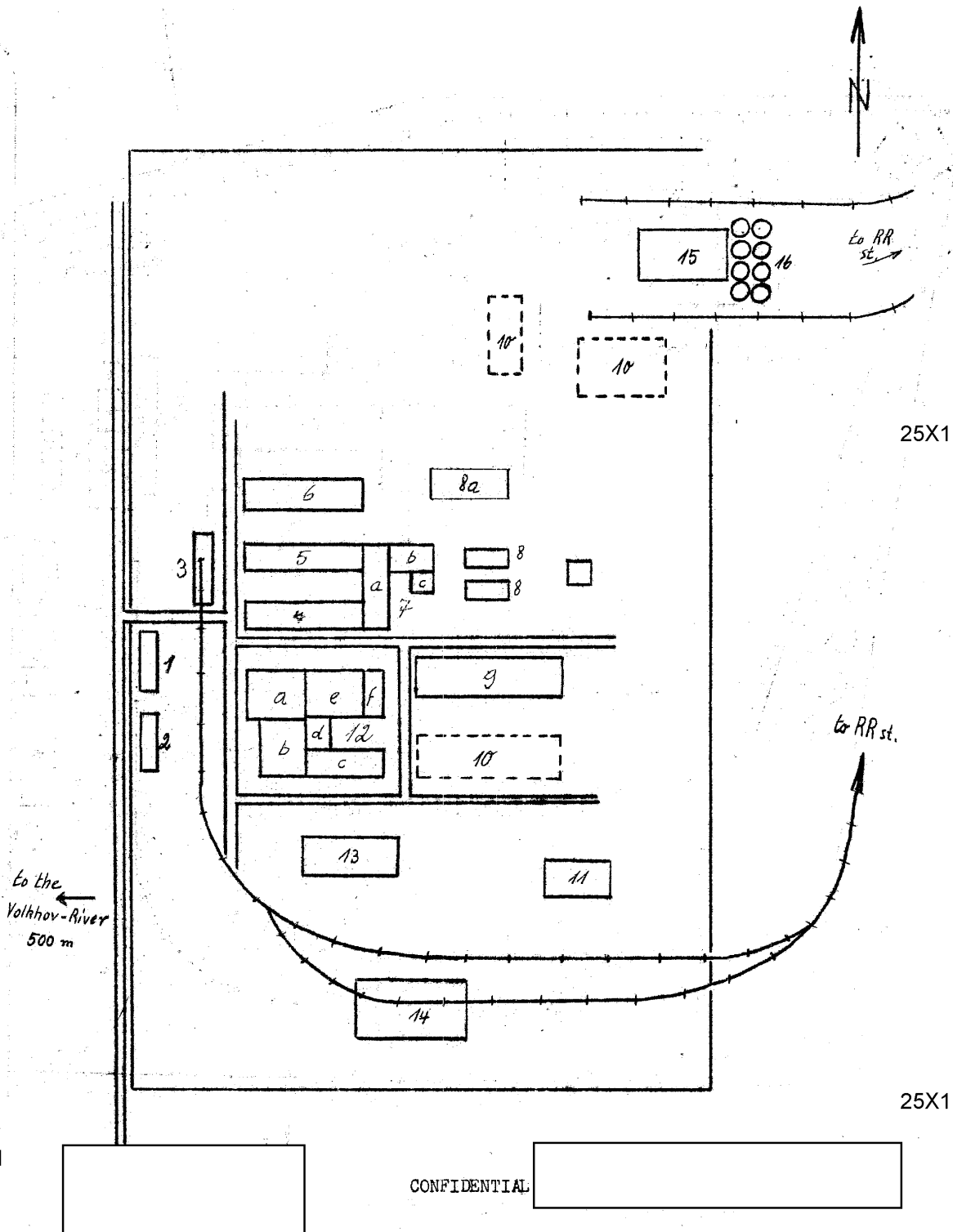
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Annex 2



Annex 3

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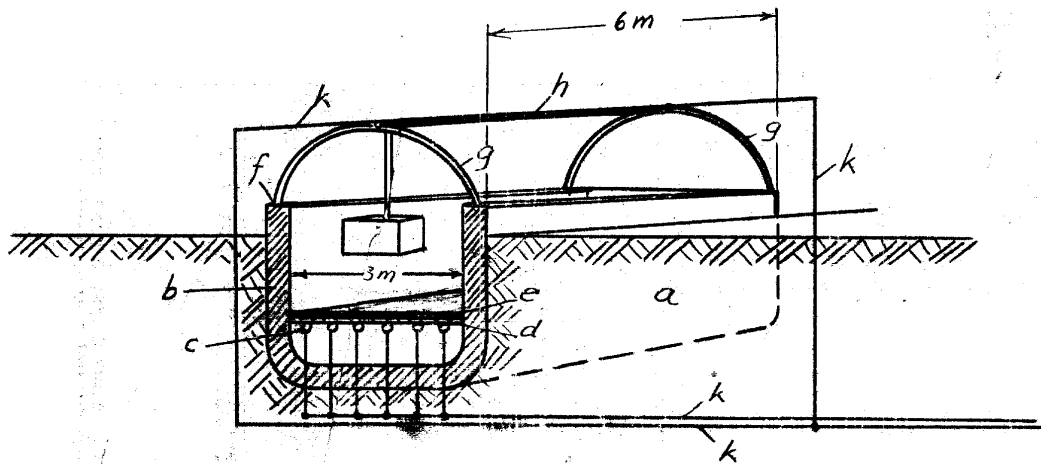
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Annex 3

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Legend to Annex 1:

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- 1 Administration, 80 x 15 x 20 meters, four stories, with dispensary and presumably laboratory.
- 2 Building, apartments of key-personnel, brick and clinker structure, 80 x 15 x 20 meters
- 3 Water tower, 26 meters in diameter
- 4 Branching-off cables from the power plant, measures 50 x 12 x 10 meters
- 5 Transformer station, 60 x 25 x 30 meters with flat roof
 - a ten rectifiers with five transformers and chokes outdoors
 - b Switch board and control device for transformer station
 - c Small transformer
- 6 Workshop under construction, iron structure, 80 x 30 x 25 meters to be production shop
- 7 Two electrolysis shops
 - a North shop, 115 x 30 x 25 meters, with two lines of light openings and flat roof, has silo for bauxite dust, 30 meters high in the west part of the building and four lines of each 20 tubs for aluminum manufacture with
 - b Building eight testing tubs for aluminum alloys and smokestack 7 meters higher than the roof
 - c Workshop South, same as a), also with silo, but only 40 tubs in operation
 - d Annex stores for aluminum bars
 - e Partially destroyed shop, used as stores for cables and tools
- 8 Stores with carbon electrode blocks and workshop to insert conductor rails into carbon blocks
- 9 Area of bauxite-earth dressing plant under reconstruction, no details available
- 10 Heating plant, 80 x 30 x 30 meters with four smokestacks, 15 meters high, and four heating furnaces, mostly fueled with peat

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gauge railroad

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2/Annex

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- a Narrow-gauge railroad line to peat area
- 11 Mechanical workshop
 - a Small foundry
 - b Mechanical department with approximately 50 machine tools of various types
- 12 Oil and gasoline dump with four tanks, 6 meters high, 8 meters diameter, underground depth of tank unknown, painted grey-green.
 - a Distribution point with pipes and valves
- 13 Cement factory, 120 x 30 x 25 meters with eight semi-circular adjacent silos, 35 meters high with flat roof reconstructed in 1948
- 14 Gasoline bunker.

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1/Annex 2

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Legend to Annex 2

- 1 Administration, 60 x 15 meters, four stories
- 2 Laboratory, 60 x 15 meters, four stories, not completely installed, no details available
- 3 Power station, 80 x 15 x 14 meters, installations not identified
- 4 Casting shop No 1, 120 x 25 x 12 meters, with 70 tubs 4.7 x 1.5 x 0.5 meters, open on top, ten additional tubs of various types (testing tubs according to Soviet statements) of which the best type will be installed in casting shop No 3.
- 5 Casting shop No 2, same size as No 1, with 80 tubs, production started in 1946
- 6 Casting shop No 3, under construction, iron frame, 120 x 30 x 12 meters, completed
- 7 Four-story storage building for completed aluminum bars with canteen on the second floor. Main Building (a) 125 x 30 meters, (b) wing, 60 x 30 meters (c) east wing, 35 x 30 meters, building partially destroyed.
- 8 Stores with carbon electrodes and construction materials, wooden sheds
 - a Wooden building with small electro workshop
- 9 Mechanical department "RMC", 150 x 40 x 10 meters, not completely installed. The small foundry in the west section of the building produced spare parts. The east section housed a forge and workshops
- 10 Destroyed workshops
- 11 Boiler house with four steam boilers, heating plant for the plant and for the town.
- 12 Bauxite dressing shop, under construction since late 1946.
 - a 60 x 50 meters, three stories
 - b 50 x 70 meters, three stories
 - c 80 x 30 meters, three stories
 - d 30 x 40 meters, two stories
 - e 70 x 50 meters, two stories
 - f 50 x 10 meters, tower

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2/Annex 2

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Boiler and furnace parts are stored near the building.

- 13 Bauxite dressing plant, 140 x 40 x 10 meters, under construction.
- 14 Bauxite store, 120 x 60 x 10 meters, vacant, with railroad track leading through the building
- 15 Cement factory, twin-workshop, 150 x 50 meters, partially destroyed, with one five-story section and one one-story section
- 16 Eight silos, 25 meters high, 10 meters in diameter; 4 were repaired.
- 17 Transformer station.

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1/Annex

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Legend to Annex 3

- A Earth
- b Tub with masonry lining, 6 meters long, 3 meters wide
- c Iron rods
- d Copper plate
- e Pig-iron plate
- f Asbestos layer
- g Bailbow
- h Two aluminum rails
- j Twelve electrodes, each 50 x 50 x 50 cm
- k Power line.

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